iAPI v1.6.5

Cortex Tool

Applies to: iAPI | v1.6.5

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Document Version Control

Version Number	Date	Description of Changes
1.0	January 18, 2021	Initial release of document.
1.1	February 3, 2021	 Updated <u>Call API</u>. Updated <u>Troubleshooting</u>.

Scope and Audience

This document describes how to use iAPI. This document is intended for Cortex Administrators.

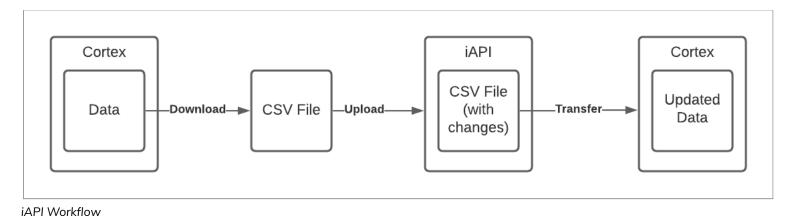
Additional Resources

- Cortex Developer's Guide
- Orange Logic DataTable APIs v2.1
- Orange Logic DataTable APIs v2.2

Overview

iAPI is a Windows desktop application created by Orange Logic to perform API calls to Cortex. iAPI allows you to upload CSV files to create, import, update, and delete metadata, Cortex users, and other Cortex database records. A standard iAPI workflow is:

- 1. You download a CSV of existing data records in Cortex.
- 2. You make changes to the CSV.
- 3. You upload that CSV to Cortex via iAPI.
- 4. iAPI updates the data in Cortex.



iAPI is meant to handle large batches of data. For example, it is common for a CSV file to have over 50,000 rows of data to be ingested. You can use iAPI to ingest large CSV files of any size. However, spreadsheet applications, like Microsoft Excel, do not handle large files like this well when searching for a record, filtering by error type, etc. Therefore, if you need to analyze the Success and Failed Logs, we recommend that you split the data into separate CSV files of 50,000 rows each. This makes it easier to analyze the CSVs. The CSV Splitter tool makes it easy to split large CSVs into smaller ones.

A Log is created each time an API is called. These Logs contain information regarding the import status of the data sent via iAPI. If your CSV failed to import all changes you can review the Failed Log CSV, make revisions, and upload the modified Failed Log to try again, rather than running the entire call again.

Requirements

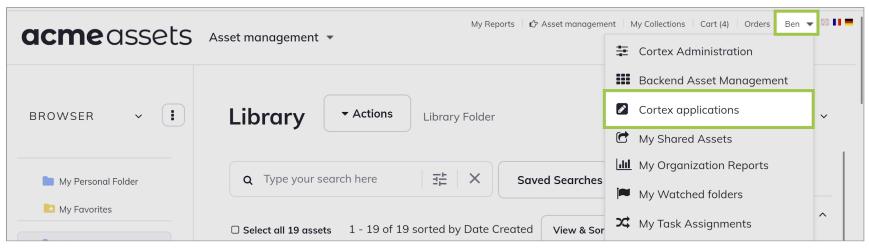
The system requirements for iAPI are:

- Windows 7 or later (Mac users must use a virtualized Windows environment, such as Parallels Desktop, VMware Fusion, or VirtualBox)
- <u>Microsoft Visual C++ Redistributable</u>: 2013 or later and 64-bit or 86-bit
- Administrator rights

Download and Install iAPI

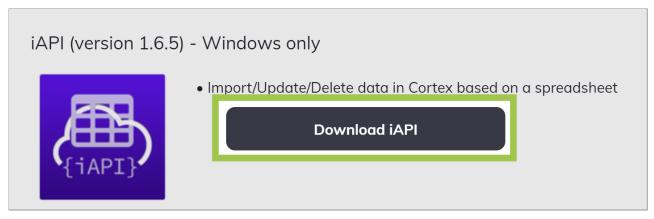
To download and install iAPI:

- 1. Log in to your Cortex site.
- 2. Click the **User Menu** and select **Cortex Applications** from the drop-down menu.



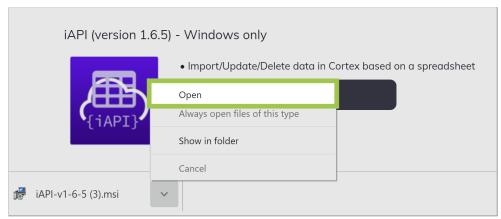
Cortex Applications in User Menu

3. Click **Download iAPI** in the **iAPI (Version) - Windows Only** section.



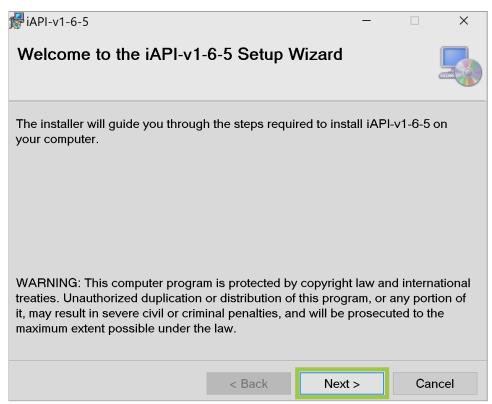
Download iAPI Button

4. The program automatically downloads. Open the file that displays at the bottom of the window. The **Welcome to the iAPI Setup Wizard** pop-up window displays.



Open iAPI File

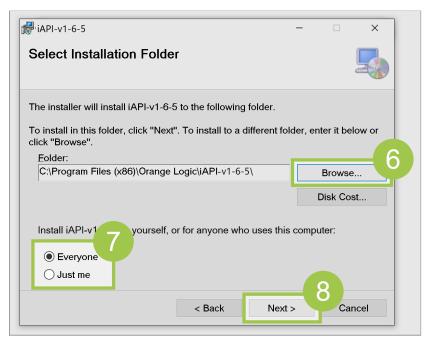
5. In this window, review the content and click **Next** to continue.



Next Button

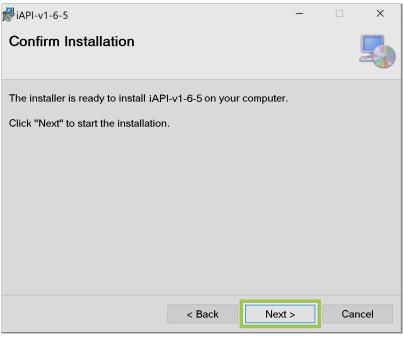
6. By default, the installer will install iAPI in the following path: **Program Files > Orange Logic > iAPI**.

- 7. Select Everyone or Just Me depending on who will be using iAPI on the computer you are installing the program on.
- 8. Click Next to continue.



Select Installation Folder

9. Click Next to confirm the installation. iAPI installs on your computer and is ready to use.



Confirm Installation

CSV Template and General iAPI Tips

CSVs should follow the formats defined in <u>RFC 4180 - Common Format and MIME Type for Comma-Separated Values (CSV) Files</u>. You must follow this <u>template</u> when you create your CSV.

Here are a few tips to keep in mind when using iAPI:

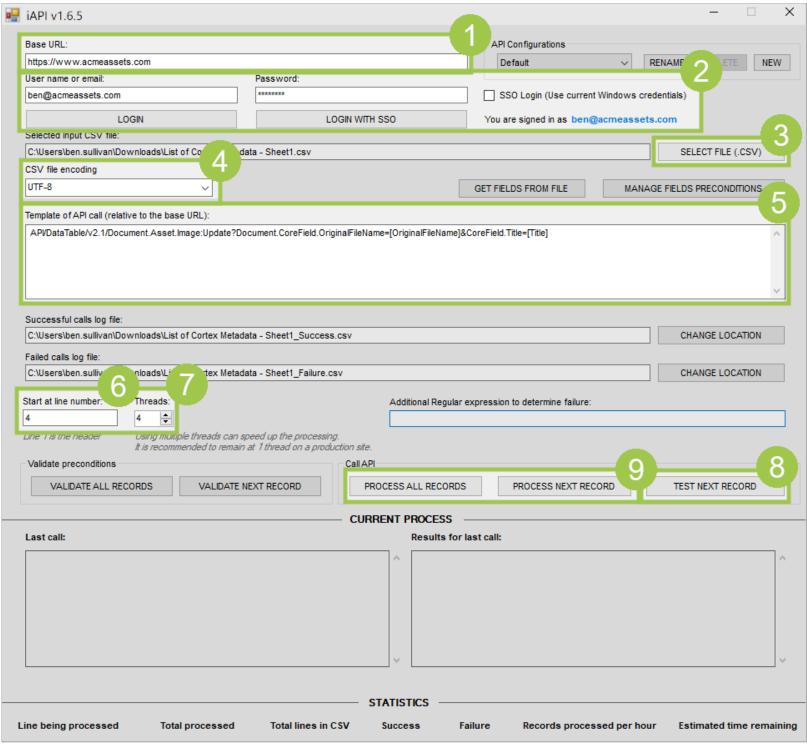
- When creating your API call, we recommend that you check the API field names so that they match in your CSV. To do this, you can use a ListFields call on your resource, such as /API/DataTable/v2.2/Documents.Image.default:ListFields.
- When your template API call is ready, you can perform a trial run in the browser using sample values. The response will be provided immediately, and if your call failed, the reason for failure will be displayed.
- When changing to another CSV, close and reopen iAPI before running the new CSV.
- Run your API call on each sub-type against the CSV to make sure you updated all assets. You can run the CSV with the call for the first sub-type, then run the Failure Log for the next sub-type, as these will be ones that did not match the call for the first sub-type. When doing this, it is helpful to change the title of the Success/Failure logs to reflect the document type for which you ran the call.
- When calling large batches, append the following criterion to the call: &IndexingPriority=Low. Since the calls can fire faster than
 the database can index them, this will prevent the queue from being overloaded in the database.
 - &IndexInBackground=1: This will skip pushing the assets to the search index inline and will speed up the API calls.
 - o **IndexingPriority=Low**: This forces the document to be indexed in a low-priority queue to avoid impacting the indexing queue used by users on the site.

Process a CSV File

This section describes how to process a CSV file. For more information about the fields in the iAPI window, go to iAPI Window.

To process a CSV file:

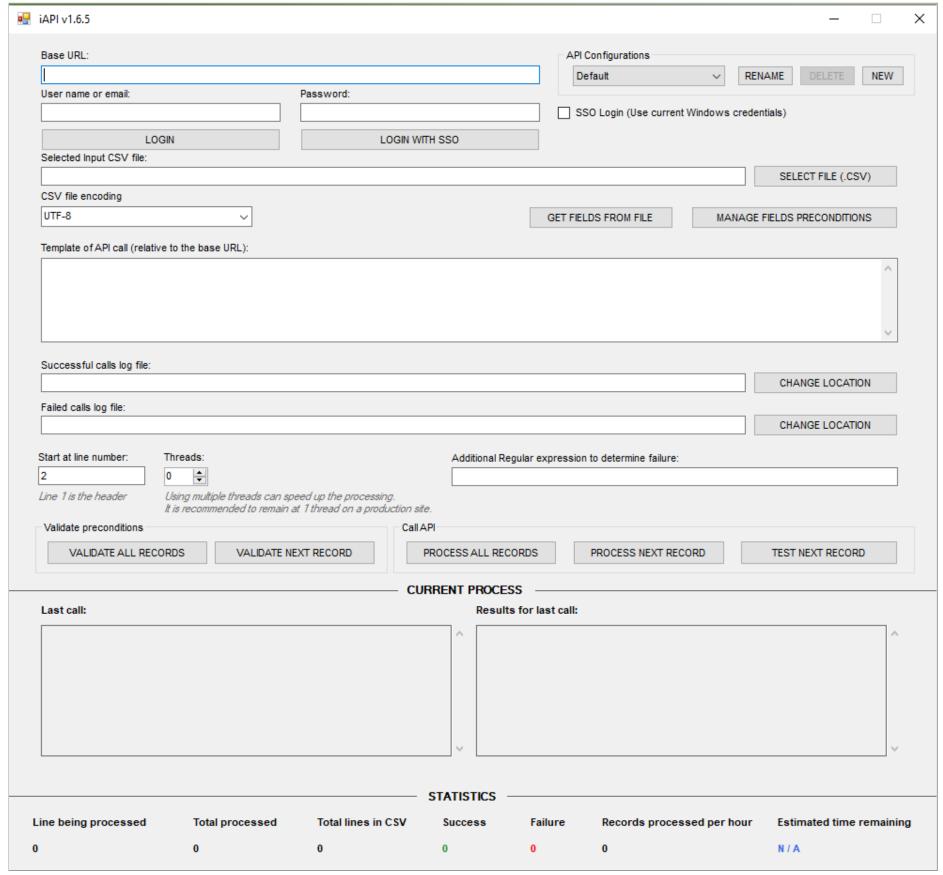
- 1. Enter the URL to your organization's Cortex site in the Base URL field.
- 2. Log in to your Cortex site.
- 3. Click Select File to attach your CSV file.
- 4. Select the encoding format you want to use for your CSV file from the **CSV File Encoding** drop-down menu.
- 5. Enter the API call in the Template of API Call (Relative to the Base URL) field.
- 6. Enter the row number you want the API to process first in the **Start At Line Number** field. By default, the line is 2 because the line 1 is generally the header.
- 7. Select how many threads should run from the **Threads** field.
- 8. We recommend you test the call before processing the CSV file. Click **Test Next Record** in the **Call API** section to test the call. If the test is successful, process the record.
- 9. Choose one of the following options to process the CSV file:
 - o Click **Process All Records** to process the whole CSV file.
 - Click **Process Next Record** to process one line at a time.



Process CSV File

iAPI Window

When you open iAPI, you are presented with this window:



iAPI Window

Base URL

Enter your organization's Cortex site in the **Base URL** field. This will allow iAPI to know where to ingest the CSV file. The URL must include the **https** prefix and the subdomain. If your organization's Cortex site does not have a subdomain, try using **www**. For example, if your organization's Cortex site is acmeassets.com, enter "https://www.acmeassets.com".



Login Options

Base URL Field

To make API calls and process CSV files, you must be logged in to Cortex. Your login and password in iAPI is the same as your credentials on your organization's Cortex site. There are three methods to log in to Cortex:

- Log in with user name or email and password
- Log in with SSO
- Log in with Windows SSO credentials

Log In with User Name or Email and Password

To log in with your username and password:

- 1. Enter your user name in the User Name or Email field.
- 2. Enter your password in the Password Field.
- 3. Click Login.



Log In With User Name and Password

Note: If you are unable to log in, verify that you entered a secure link in the Base URL field by adding the prefix "https" in the URL.

Log In With SSO

Use the Login With SSO button if your organization's Cortex site uses SSO to log in.

To log in with SSO:

- 1. Click Login With SSO. The login page to your organization's Cortex site automatically displays in a new window.
- 2. In this window, enter your email address in the Email Address field.
- 3. Enter your password in the **Password** field.
- 4. Click **Login**. The **Authenticate iAPI** panel displays.



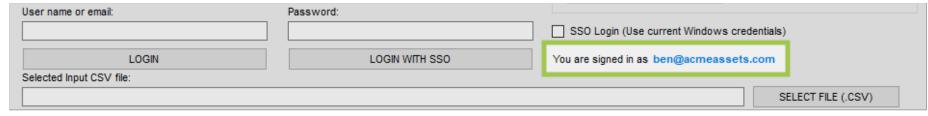
Sign In

- 5. By default, the **Remember For** checkbox is selected. You can select how long you want iAPI to be authenticated under your login credentials by selecting an option in the drop-down menu. You can choose from 1 day, 1 week, 1 month, 3 months, and 6 months. For iAPI to only authenticate the current session, deselect the checkbox.
- 6. Click **Authenticate** to authenticate your login credentials. **Note**: You must authenticate your login credentials within three minutes. Otherwise, the login will timeout.



Authenticate iAPI Panel

Once you have authenticated the login, your email displays in the iAPI window.



Email Displayed in iAPI Window

SSO Login (Use Current Windows Credentials)

If you use SSO for your Windows computer and Cortex and those login credentials are the same, select the **SSO Login (Use Current Windows Credentials)** checkbox. The **User Name or Email** and **Password** fields autopopulate with your Windows SSO credentials.

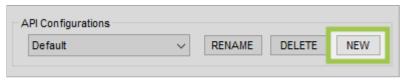
SSO Login (Use Current Windows Credentials) Checkbox

API Configurations

The API Configurations section allows you to set up templates. This is helpful if you generally use the same API calls often.

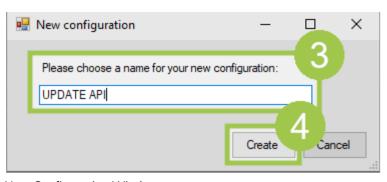
To create a template:

- 1. Set up the iAPI window with the information that you want to save. For example, if you commonly use the UPDATE API, enter the API call in the **Template of API Call (Relative to the Base URL)** field.
- 2. Click New.

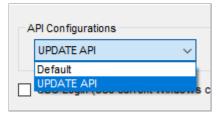


New Button

- 3. Enter a name for the template in the New Configuration window.
- 4. Click **Create**. The template is saved and can be found in the **API Configurations** drop-down menu.



New Configuration Window



API Configurations Drop-Down Menu

Select Input CSV File

Note: You must use the correct quotation marks. iAPI supports the Unicode Quotation Mark (<u>code point U+0022</u>). It does not support the Unicode Right Double Quotation Mark (code point U-201D), which is also referred to as the "curly quotation mark".

In the Select Input CSV File section, upload the CSV file that contains the data you want to ingest. The delimiters for the CSV file are:

- Text Qualifier: " (quotation mark)
- Field Separator: , (comma)
- Multi Select Field Separator: | (pipe)
- End of Line Character: CR/LF
- Header Rows: Column Names do not use special characters (!@#\$%^&*)
- Footer Rows: none

To add the CSV file:

1. Click Select File (CSV). A pop-up window displays.



2. In this window, select the CSV file you want to upload and click Open. The name of the file displays in the field.



CSV File Encoding

The CSV File Encoding drop-down menu allows you to choose from these encoding methods:

- UTF-8
- ANSI (Your Machine's ANSI Encoding)
- ANSI (Windows Western)

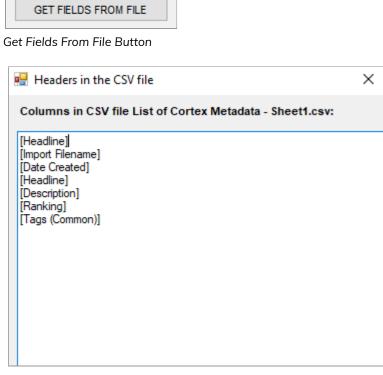
The encoding method you select here must match the encoding method of your CSV file. Otherwise, the imported content may not transfer well. For example, foreign characters may end up displaying as symbols. If this occurs, re-process the CSV file with a different encoding method. For example, if you processed a file with ANSI (Windows Western) and the results did not match the CSV file, then re-process the CSV file with UTF-8.

Some spreadsheet applications allow you to select the encoding method when you save the file as a CSV. However, there are some applications that do not allow you to select a method. At the time of publication, the following are common spreadsheet applications and their encoding methods:

- Google Docs: UTF-8
- Microsoft Excel: UTF-8 for Microsoft Excel 2014 and later. ANSI for Microsoft Excel 2013 and earlier.

Get Fields From File

The **Get Fields From File** button opens the **Headers In the CSV File** window which displays all the column names from the CSV file. Use this button to verify that iAPI recognizes all the column names in the CSV file.



Headers In the CSV File Window

Manage Fields Preconditions

The **Manage Fields Preconditions** button allows you to add preconditions for each CSV field name to follow. For example, you can add a precondition for the "Title" field to only be imported if the maximum length is 250 characters.

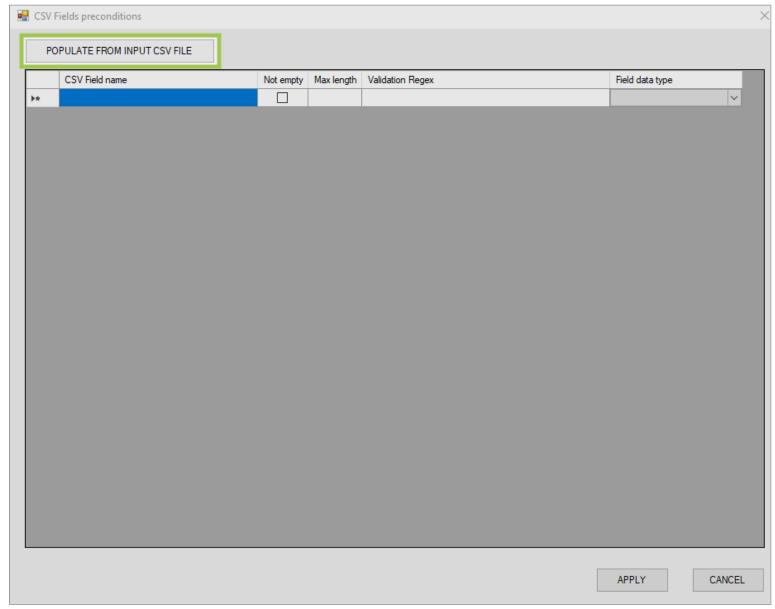
To add preconditions:

1. Click Manage Fields Preconditions. The CSV Fields Preconditions window displays.



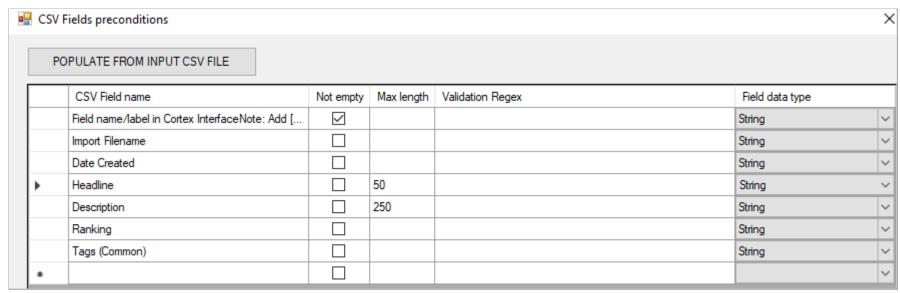
Manage Fields Preconditions Button

2. In this window, click **Populate From Input CSV File** to display the CSV Field names.



Populate From Input CSV File Button in CSV Fields Preconditions Window

- 3. Add the conditions in the <u>CSV Fields Preconditions window</u>.
- 4. Close the window to save your conditions.



CSV Fields Preconditions Window

CSV Fields Preconditions Window

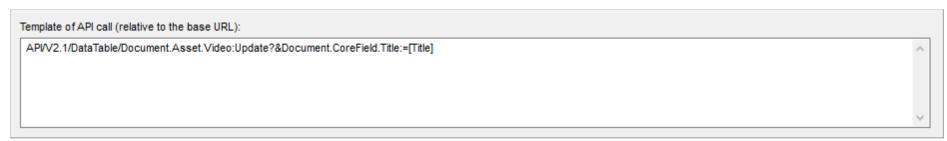
The following table describes the columns that display in the CSV Fields Preconditions window:

Column Name	Description	
CSV Field Name	Displays the name of the field in the CSV file. All conditions added within this row will be applied to this field.	
Not Empty	If selected, iAPI will only process the field if it is not empty.	
	If deselected, iAPI will process the field, even if it is empty.	
Max Length	The maximum number of characters allowed for that field. If a number is entered, iAPI will only process the field if	

	the number of characters is less than the value added here.	
	If this is blank, the number of characters will not be taken into account.	
Validation Regex	A Regex formula that each row should follow. If a formula is entered, iAPI will only process the row if it follows this formula.	
	If this is blank, a formula will not be taken into account.	
Field Data Type	The type of data in the field. The options are: • String • Integer • Float	

Template of API Call (Relative to the Base URL)

Enter the API call in the **Template of API Call (Relative to the Base URL)** field. API calls used here should follow the DataTable API syntax. For more information, see <u>Orange Logic - DataTable APIs v2.1</u> or <u>Orange Logic - DataTable APIs v2.2</u>.



Template of API Call (Relative to the Base URL) Field

The types of API calls that can be used are:

- Update
- Create
- CreateorUpdate
- Delete

DataTable API Calls

The following table displays example API calls based on the Update DataTable call: **API/V2.1/DataTable/Document.Asset.Video:Update?**. This table also includes the associated Cortex field that the metadata will be ingested to.

API Call	Cortex Field
Document.CoreField.OriginalFileName=[Original File name]	Document.CoreField.OriginalFileName
&Document.CoreField.Title:=[Title]	Document.CoreField.Title
&Document.CoreField.captionlong_2:=[Alternate Description]	Document.CoreField.captionlong_2
&Document.CoreField.CaptionLong:=[Description]	Document.CoreField.CaptionLong
&Document.Tags.Topic++=[Topic]	Document.Tags.Topic
&Document.Tags.RegionOffice++=[Region/Office]	Document.Tags.RegionOffice
&Document.Tags.Keyword++=[keywords]	Document.Tags.Keyword++=[keywords]

List of Fields for DataTable API Calls

To view a list of all fields used in video assets for DataTable, use:

https://www.[SITENAME]/API/V2.1/DataTable/Document.Asset.Video:ListFields

To view a list of all fields used in image assets for DataTable, use:

https://www.[SITENAME]/API/V2.1/DataTable/Document.Asset.Image:ListFields

To view a list of all DataTable resources, use:

https://www.[SITENAME]/API/Datatable/v2.2

Assign or Remove Multiple Values in a Multivalued Field

The operator for assigning a value to a single value field is: = (equals sign). To assign or remove multiple values in a multivalued field, the operators are:

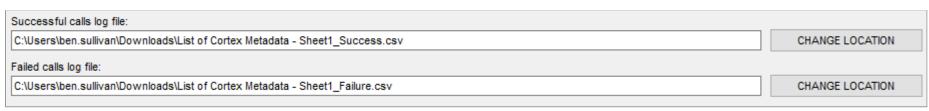
- Add a value to the field: +=
- Add a value to the field and create a field if it does not exist in the reference table: ++=
- Remove a value from the field: -=
- Remove all values from the field: --=

Successful and Failed Calls Log File

The Successful Calls Log File displays the path to the log file in which successful API calls are automatically logged.

The **Failed Calls Log File** displays the path to the log file in which failed API calls are automatically logged. When a call fails, the Failure Log provides information on why the call has failed, helping you in troubleshooting the problem with your call. Make the necessary changes in the CSV and try again.

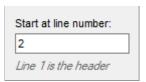
You can change the location for either of these files by clicking **Change Location**.



Successful and Failed Calls Log File Fields

Start at Line Number

The first line is the header of the CSV file. Select which row in the CSV file you want the API call to start with in the **Start at Line Number** field.



Start at Line Number

Threads

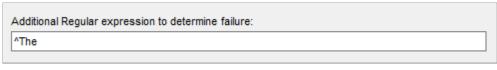
Enter the number of threads that should run simultaneously in the **Threads** field. You can run up to four threads at once. Using threads is dynamic to your computer's processor. Using multiple threads can speed up the calls, however, this can impact performance if there are many users in Cortex.



Threads Field

Additional Regular Expressions to Determine Failure

The **Additional Regular Expressions to Determine Failure** field allows you to enter a Regex formula to search for a particular pattern while processing the call. If the call locates that pattern, then ultimately, the processing will be considered a failure regardless of a successful API call or HTTP code.



Additional Regular Expressions to Determine Failure Field

Validate Preconditions

If you specified preconditions in the <u>Manage Fields Preconditions</u> section, you can validate those preconditions. The **Validate Preconditions** section contains these buttons:

- Validate All Records: Click this button to validate all records simultaneously.
- Validate Next Record: Click this button to validate one record at a time.

You can view the status of the validation in the <u>Current Process</u> and <u>Statistics</u> sections.

Call API

The **Call API** section allows you to run the API call with these buttons:

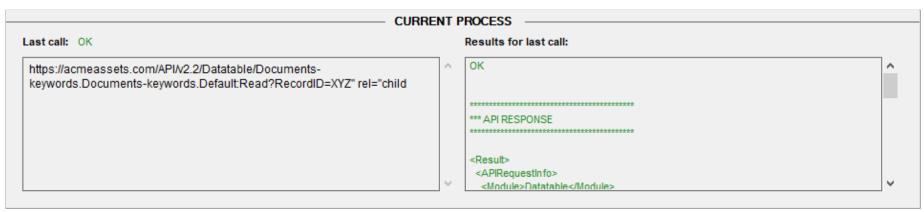
- Process All Records: Click this button to process all records simultaneously.
- Process Next Record: Click this button to process one record at a time.
- **Test Next Record**: Click this button to test one record at a time before processing the call. This allows you to identify any errors without processing the line and inserting values. When an API is run in Test Mode, the changes are applied and then rolled back immediately. We recommended you test your calls before processing any records. If you receive the "The input API is not available in test mode" message, go here.

Current Process

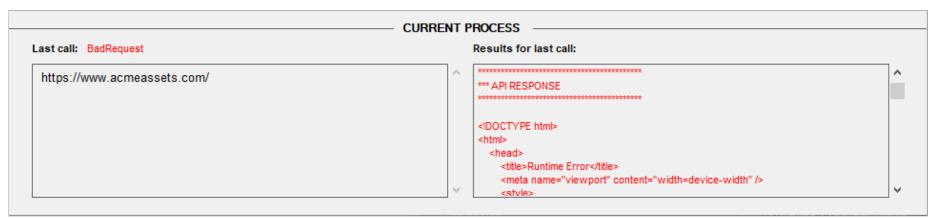
The **Current Process** section is split into two panels:

- Last Call: Displays information on the calls that are currently being processed. You can copy the call from this window and run it directly in your web browser. This is useful to more easily see the call details, including values populated and error details.
- **Results For Last Call**: Displays the results of the last processed call. You can copy and paste this content in a text document. This allows you to easily search for errors.

Successful calls display in green and failed calls display in red.



Successful Call



Failed Call

Statistics

The **Statistics** section displays the following information on calls that are currently being processed and calls that have already been processed:

- **Line Being Processed**: The current row that is being processed.
- **Total Processed**: The number of rows that have been processed.
- Total Lines in CSV: The total number of rows that need to be processed.
- Success: The number of rows that were successfully processed.
- Failure: The number of rows that failed to process.
- Records Processed Per Hour: The average number of records that have been processed per hour.
- **Estimated Time Remaining**: The estimated time remaining for the process to complete. This is calculated by checking how long it is taking to process one API call, and multiplying that by the number of CSV rows remaining to process.

Factors That Impact the Speed of API Calls

There are multiple factors that impact the speed of API calls with iAPI:

- **Field Type**: Writing a CoreField is faster than writing a Custom Field because Core Fields are automatically indexed and Custom Fields are not. For example: Update?CoreField.ID-Client=123&CoreField.Legacy-ID:=456 is faster than Update?CoreField.ID-Client=123&CustomField.Legacy-ID:=456.
- Server: For example, servers that run few tasks have a higher speed than those that run lots of tasks simultaneously.
- The call itself: For example, calls that read data have a higher speed than calls that re-write data.
- The internet speed: This is not a key factor. The call will not necessarily run faster on a machine with high-speed internet because the other factors dictate limitations on the internet speed.

When launching large batches on Production sites, append the following criterion to the call: **&IndexingPriority=Low**. This will prevent the queue from being overloaded in the database since the calls can fire faster than the database can index them.

Note: Appending **&IndexInBackground=1** will skip pushing the assets to the search index inline and will speed up the API calls. Appending **&IndexingPriority=Low** forces the document to be indexed in a low-priority queue to avoid impacting the indexing queue used by users logged in to Cortex.

Run Multiple Instances of iAPI

Running multiple instances of iAPI allows for simultaneous processing of large numbers of API calls. For example, you may need to run multiple instances to run millions of API calls to update assets.

To run multiple instances of iAPI, duplicate the folder that contains App_iAPI (application) and App_iAPI.exe (configuration file).

Example: Duplicating a Folder

Original folder that contains App_iAPI and App_iAPI.exe: Orange Logic > iAPI-v1-4-2

Copy of the folder that contains App_iAPI and App_iAPI.exe: Orange Logic > iAPI-v1-4-2

Enable Automated Emails With API

If you are using API calls to create accounts using a CSV, by default, the Events that are generated by these calls will not send email notifications. Add &AllowNotifications=1 in the API call to enable emails.

Example: Create New Accounts by API

Let's say you want to create new accounts by API. The **Administrator Created a New Contact** Event Type will be triggered and logged; however, Cortex will not send an email notification to the new contacts. Enable email notifications by adding "&AllowNotifications=1" to the API call.

Sample call:

API/Datatable/v2.1/Document.Asset.Image:Update?Document.CoreField.Identifier=IMAGEID1&Document.CoreField.DocMark:=I**&AllowNotifications=1**

Accept Terms & Conditions or Privacy Notice with API

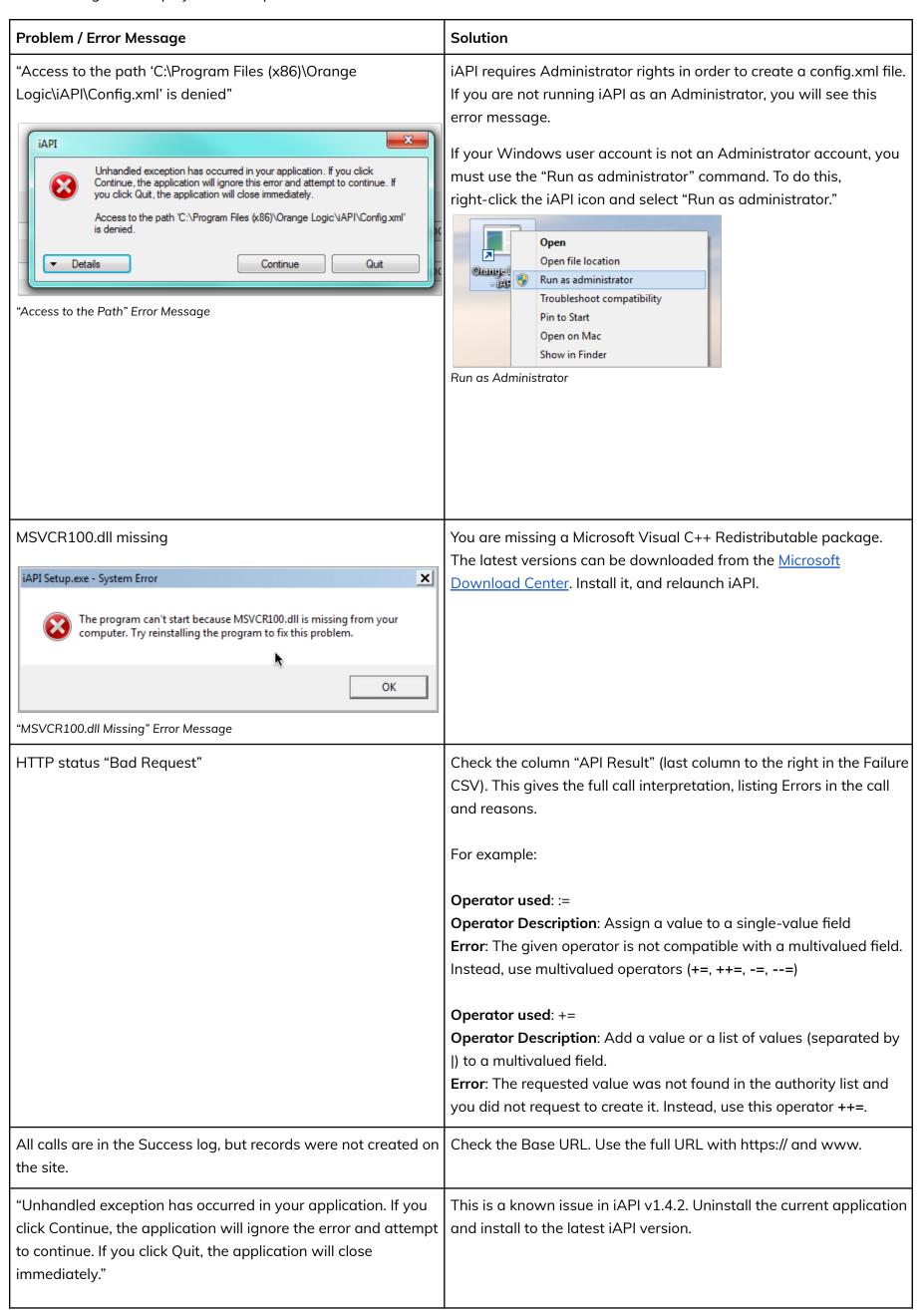
You can require users to accept the Terms & Conditions or Privacy Notices with API the next time they login. For example, if the Privacy Policy was updated, you can require users to accept the new policy.

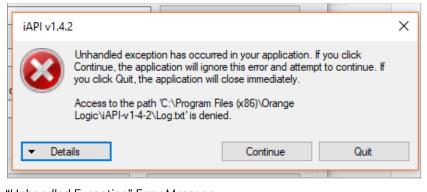
To require users to accept the Terms & Conditions or Privacy Notice the next time they log in:

- 1. Export a CSV file containing all users.
- 2. Do one of the following:
 - Use iAPI to automatically deselect the Consent Privacy Notice checkbox with the following template API:
 API/Datatable/v2.1/Contact.Client:Update?Contact.CoreField.Email1=[Email
 address]&Contact.CoreField.ConsentPA:=0. In this API, "Email Address" is the name of the column in the CSV file.
 - Use iAPI to automatically deselect the **Terms & Conditions** checkbox with the following template API: Terms and Conditions' with Contact.CoreField.ConsentTC:=0.

Troubleshooting

The following table displays common problems and their solutions.





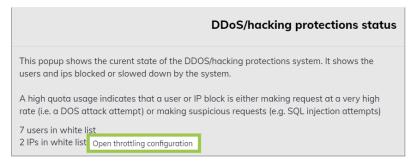
"Unhandled Exception" Error Message

509 Error

Your session may be blocked due to the volume of API calls you have made. Cortex sometimes interprets large volumes of API calls as a Distributed Denial of Service (DDoS) attack and blocks or throttles the calls as a defense. Whitelisting the user prevents Cortex from blocking or throttling the user.

To whitelist a user:

- Go to Cortex Administration > Maintenance > DDoS/Hacking Protection Status.
- 2. Click **Open Throttling Configuration**. A new browser tab opens.



Open Throttling Configuration

- 3. In this tab, click **New**.
- 4. Enter the IP Address or the Contact.
- 5. In the **Status** drop-down menu, select **Whitelisted**.
- 6. In the **Cause** field, enter the reason for whitelisting the user or IP address.
- 7. Click **Save**. The user or IP address is added to the whitelist and will not be blocked from Cortex.



Whitelist User or Contact

Tags are not imported as separate tags, even though they are comma-separated.

Commas and semicolons are not supported. Tags must be pipe delimited (|).

Incorrect:

- cone, dessert, ice cream, treat, waffle
- cone; dessert; ice cream; treat; waffle

